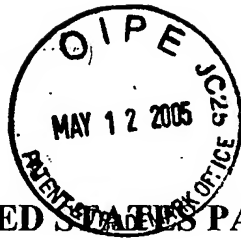


COPY



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re

Application of: James N. Usko, et al.

Reissue

Application No.: 10/013,988 Examiner: E. Solis

Filed: December 13, 2001 Group Art Unit: 3747

For: MULTI-CYCLE, ENGINE BRAKING WITH POSITIVE POWER VALVE
ACTUATION CONTROL SYSTEM AND PROCESS FOR USING THE
SAME

Attorney Docket No.: 34090-06263

AMENDMENT AND RESPONSE

Assistant Commissioner for Patents
BOX REISSUE
Washington, DC 20231

Dear Sir:

In response to the Office Action dated November 19, 2004, Applicants submit the following amendment and remarks. Amendments to the claims are reflected in the listing of claims which begins on page 2 of this paper. Applicants' remarks begin on page 14.

05/13/2005 JADD01 00000058 032469 10013988

02 FC:1252 450.00 DA

IN THE CLAIMS

1. (original) An apparatus for performing multi-cycle engine braking, said apparatus comprising:

exhaust valve operating means for operating at least one exhaust valve of an engine cylinder during a positive power engine operation;

intake valve operating means for operating at least one intake valve of the engine cylinder; and

braking means for operating the at least one exhaust valve of the engine cylinder during an engine braking operation, wherein said braking means accomplishes at least two braking operations for the at least one exhaust valve per engine cycle during the engine braking operation, wherein said intake valve operating means delays the operation of the at least one intake valve during the engine braking operation

2. (original) The apparatus according to claim 1, wherein said means for operating the at least one exhaust valve during the positive power engine operation includes an exhaust rocker arm.

3. (original) The apparatus according to claim 1, wherein said exhaust valve operating means includes exhaust valve engaging means for engaging the at least one exhaust valve to effectuate operation of the at least one exhaust valve.

4. (original) The apparatus according to claim 3, wherein said exhaust valve engaging means releasably engages a crosshead pin of the at least one exhaust valve.

5. (original) The apparatus according to claim 3, wherein said exhaust valve engaging means comprises a lash adjusting assembly.

6. (original) The apparatus according to claim 5, wherein said lash adjusting assembly is hydraulically operated.

7. (original) The apparatus according to claim 1, wherein said exhaust valve operating means disengages the at least one exhaust valve during the engine braking operation.

8. (original) The apparatus according to claim 1, wherein said intake valve operating means operates the at least one intake valve during the positive power engine operation.

9. (original) The apparatus according to claim 1, wherein said intake valve operating means includes an intake rocker arm.

10. (original) The apparatus according to claim 8, wherein said intake valve operating means includes intake valve engaging means for engaging the at least one

intake valve to effectuate operation of the at least one intake valve during the positive power engine operation.

11. (original) The apparatus according to claim 10, wherein said intake valve engaging means releasably engages a crosshead pin of the at least one intake valve.

12. (original) The apparatus according to claim 10, wherein said intake valve engaging means comprises a lash adjusting assembly.

13. (original) The apparatus according to claim 12, wherein said lash adjusting assembly is hydraulically operated.

14. (original) The apparatus according to claim 12, wherein said lash adjusting assembly retracts to a braking position during the engine braking operation such that the operation of the at least one intake valve is delayed.

15. (original) The apparatus according to claim 1, wherein said means for operating the at least one exhaust valve of the engine cylinder during the engine braking operation includes a brake rocker arm.

16. (original) The apparatus according to claim 1, wherein said brake rocker arm engages a crosshead pin for the at least one exhaust valve during the at least two engine braking operation.

17. (original) The apparatus according to claim 16, wherein said brake rocker arm disengages the crosshead pin during the positive power engine operation.

18. (original) The apparatus according to claim 1, wherein said braking means includes means to accomplish an exhaust gas recirculation event.

19. (original) A method of performing multi-cycle engine braking, said method comprising the steps of:

performing a first compression release event, wherein said first compression release event includes the steps of opening at least one exhaust valve to effectuate engine braking, and closing the at least one exhaust valve after predetermined time, wherein said step of opening the at least one exhaust valve to effectuate engine braking during said first compression release event is initiated prior to compression top dead center;

performing a second compression release event, wherein said second compression release event includes opening the at least one exhaust valve to effectuate engine braking, and closing the at least one exhaust valve after predetermined time, wherein said step of opening the at least one exhaust valve to

effectuate engine braking during said second compression release event is initiated prior to exhaust top dead center; and

delaying the opening of at least one intake valve for a predetermined time during engine braking.

20. (original) The method according to claim 19, further comprising the step of:

performing an exhaust gas recirculation event at the conclusion of said first compression release event.

21. (original) The method according to claim 19, wherein said step of opening at least one intake valve occurs after exhaust top dead center.

22. (currently amended) An assembly for operating an engine valve comprising:

a rocker shaft;

a rocker arm pivotally mounted on said rocker shaft, said rocker arm including a cavity at a valve actuation end;

an hydraulic lash adjuster slidably disposed in the rocker arm cavity;

an hydraulic passage provided in the rocker arm, said passage communicating with the rocker arm cavity; and

means for (a) selectively supplying hydraulic fluid to the passage during a positive power mode of engine operation and (b) venting hydraulic fluid from the passage during an engine braking mode of engine operation, wherein the engine braking mode comprises at least two braking operations.

23. (previously presented) The assembly of Claim 22, wherein said hydraulic lash adjuster comprises:

- an outer plunger slidably received in the cavity; and
- an inner plunger slidably received in the outer plunger.

24. (previously presented) The assembly of Claim 22, wherein said means for supplying and cutting off supply comprises a normally open three-way solenoid valve.

25. (previously presented) The assembly of Claim 22, wherein said means for supplying and cutting off supply is mounted on said rocker shaft.

26. (previously presented) The assembly of Claim 22, wherein said means for supplying and cutting off supply provides hydraulic fluid flow control for a plurality of lash adjusters.

27. (currently amended) A method of operating an engine valve lash adjuster in an internal combustion engine comprising the steps of:

determining that an engine is operating in a positive power mode;
selectively supplying hydraulic fluid to a lash adjuster in response to a determination that the engine is operating in a positive power mode of operation;
determining that the engine is operating in an engine braking mode; and
venting hydraulic fluid from the lash adjuster in response to a determination that the engine is operating in an engine braking mode of operation, wherein the engine braking mode comprises at least two braking operations.

28. (currently amended) An engine valve actuation system for positive power mode and compression brake mode engine operation, said system comprising:

a first rocker arm positioned to selectively actuate one or more valves associated with an engine cylinder;

a first hydraulic lash adjuster operatively contacting the first rocker arm, said first hydraulic lash adjuster being adapted to provide more lash during compression brake operation than during positive power operation;

a second rocker arm positioned to selectively actuate at least one of the one or more valves associated with the engine cylinder; and

a second hydraulic lash adjuster operatively contacting the second rocker arm, said second hydraulic lash adjuster being adapted to provide more lash during positive power operation than during compression brake operation,

wherein the compression brake operation comprises a first compression release event and a second compression release event.

29. (previously presented) The system of Claim 28 wherein the first rocker arm is an exhaust rocker arm, and wherein the second rocker arm is a brake rocker arm.

30. (previously presented) The system of Claim 28 wherein the first rocker arm is an intake rocker arm, and wherein the second rocker arm is a brake rocker arm.

31. (previously presented) The system of Claim 28 further comprising a brake cam in operative contact with the second rocker arm, said brake cam having at least two compression-release lobes adapted to provide two-cycle engine brake operation.

32. (previously presented) The system of Claim 28 wherein the first hydraulic lash adjuster extends out of an end of the first rocker arm.

33. (previously presented) The system of Claim 32 wherein the second hydraulic lash adjuster extends out of an end of the second rocker arm.

34. (previously presented) The system of Claim 28 further comprising:
a third rocker arm positioned to selectively actuate one or more additional valves associated with the engine cylinder; and
a third hydraulic lash adjuster operatively contacting the third rocker arm, said

third hydraulic lash adjuster being adapted to provide more lash during compression brake operation than during positive power operation.

35. (previously presented) The system of Claim 34 wherein the third rocker arm is an intake rocker arm.

36. (previously presented) The system of Claim 34 further comprising a shared hydraulic supply circuit for the first hydraulic actuator and the third hydraulic actuator.

37. (previously presented) The system of Claim 28 further comprising a valve bridge between the first rocker arm and the one or more valves associated with the engine cylinder.

38. (previously presented) The system of Claim 37 further comprising means for actuating a valve through the valve bridge using the second rocker arm.

39. (previously presented) The system of Claim 34 further comprising a valve bridge between the third rocker arm and the one or more additional valves associated with the engine cylinder.

40. (previously presented) An engine valve actuation system for positive

power mode and two-cycle compression brake mode engine operation, said system comprising:

- an exhaust rocker arm positioned to selectively actuate an exhaust valve;
- a first hydraulic lash adjuster positioned between the exhaust rocker arm and the exhaust valve;
- a brake rocker arm positioned to selectively actuate the exhaust valve; and
- a second hydraulic lash adjuster positioned between the brake rocker arm and the exhaust valve.

41. (previously presented) The system of Claim 40 further comprising:
means for selectively providing hydraulic fluid to the first hydraulic lash adjuster during positive power mode operation; and
means for selectively providing hydraulic fluid to the second hydraulic lash adjuster during compression brake mode operation.

42. (previously presented) The system of Claim 41 wherein the first hydraulic lash adjuster extends out of an end of the exhaust rocker arm.

43. (previously presented) The system of Claim 42 wherein the second hydraulic lash adjuster extends out of an end of the brake rocker arm.

44. (previously presented) The system of Claim 40 further comprising a valve

bridge between the exhaust rocker arm and the exhaust valve.

45. (previously presented) The system of Claim 44 further comprising means for actuating the exhaust valve through the valve bridge using the brake rocker arm.

46. (previously presented) The system of Claim 40 further comprising a brake cam in operative contact with the second rocker arm, said brake cam having at least one compression-release lobe and at least one exhaust gas recirculation lobe.

47. (previously presented) The system of Claim 28 further comprising a brake cam in operative contact with the second rocker arm, said brake cam having at least one compression-release lobe and at least one exhaust gas recirculation lobe.

48. (currently amended) A method for positive power mode and compression brake mode engine valve actuation in a system having first and second rocker arms used to actuate an engine valve, said method comprising the steps of:

providing hydraulic fluid to a first lash adjuster associated with the first rocker arm and draining hydraulic fluid from a second lash adjuster associated with the second rocker arm during positive power mode;

actuating the engine valve with the first rocker arm during positive power mode;

providing hydraulic fluid to the second lash adjuster and draining hydraulic fluid from the first lash adjuster during compression brake mode; and

actuating the engine valve with the second rocker arm during compression brake mode,

wherein the compression brake mode comprises a first compression release event and a second compression release event.

49. (previously presented) The method of Claim 48 wherein the engine valve is actuated two times per engine cycle during compression brake mode near piston top dead center position to achieve two-cycle compression braking.

50. (previously presented) The method of Claim 48 wherein the engine valve is actuated to achieve exhaust gas recirculation during compression brake mode.

REMARKS

Claims 1-50 are pending in this application. By this amendment, Claims 22, 27, 28, and 48 are amended. No new matter is added. Applicants respectfully request reconsideration of the rejections in view of the following remarks.

I. The Application Complies With 37 CFR 1.172(a)

The application was objected to under 37 CFR 1.172(a) as the assignee allegedly has not established its ownership interest in the patent for which reissue is being requested. In response, Applicant submits the following papers:

- Corrected Assignment Recordation Form Cover Sheet correcting the Original Assignment Recordation Form Cover Sheet as filed with the application that matured into U.S. Patent 6,000,374 and recorded at Reel 8949 Frame 0408. The Corrected Assignment Recordation Form Cover Sheet correctly lists Jacobs Vehicle Systems, Inc. as the sole receiving party;
- Original Assignment Recordation Form Cover Sheet as filed with the application that matured into U.S. Patent 6,000,374;
- Copy of Assignment document executed December 19, 1997 assigning ownership interest in the invention disclosed in U.S. Patent No. 6,000,374 to Jacobs Vehicle Systems; and
- Recordation fee pursuant to 37 CFR 1.21(h) in the amount of \$40.00.

The original assignment recordation form cover sheet lists Diesel Engine Retarders as assignee. The original assignment document executed by the present

inventors, however, accurately assigns the ownership interest to Jacobs Vehicle Systems ("Jacobs").

Applicant's undersigned attorney spoke with a representative of the Assignment Recordation Branch at the Office regarding correction of the present issue. The representative indicated that submission of the above documents would correctly record the Original Assignment document which establishes that Jacobs holds sole ownership of U.S. Patent No. 6,000,374. As such, the Consent of Assignee Under 37 CFR 1.172 executed by Brian Burnett, President of Jacobs, and submitted previously, is an appropriate paper satisfying the requirements of 37 CFR 3.73. Accordingly, Applicants respectfully submit that the present reissue application complies with 37 CFR 1.172(a) and request reconsideration and withdrawal of the objection.

II. The Reissue Oath and Declaration Complies with 37 CFR 1.175

Claims 1-50 were rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 and 37 CFR 1.175 because it failed to identify at least one error which is relied upon to support the reissue application. In particular, the Office states that "[t]he applicant does not specifically state what the changes to the claims are, applicant must describe how the new claims differ from the patented claims." Applicants respectfully submit that the Supplemental Reissue Oath and Declaration filed herewith complies with 35 U.S.C. 251 and 37 CFR 1.175.

The enclosed Supplemental Reissue Oath and Declaration specifically states the changes to the claims, and describes how the new claims differ from the patented

claims. In particular, pursuant to 37 CFR 1.175(a)(1), Paragraph 5 of the Supplemental Reissue Oath and Declaration submitted herewith states that:

[O]riginal U.S. Patent No. 6,000,374 is partly inoperative by reason of the original patent claiming less than I had a right to claim in the patent. The claims have been changed by adding Claims 22-50. The subject matter of Claims 22-50 was inadvertently not incorporated into the Claims of the original patent. In particular, the original claims did not recite: an assembly and an engine valve actuation system having an hydraulic lash adjuster and/or first and second hydraulic lash adjusters as recited in Claims 22, 28, and 40, and a method including the steps of providing hydraulic fluid to a lash adjuster and/or first and second lash adjusters as recited in Claims 27 and 48.

In addition, Paragraph 6 of the Supplemental Oath and Declaration states that:

U.S. Patent No. 6,000,374 is partly inoperative by reason of a defective specification and drawings. In particular, the paragraphs and Figures of U.S. Patent No. 6,000,374 amended in the Preliminary Amendment and Request for Approval of Drawing corrections filed December 13, 2001 include typographical and other inadvertent errors. These amendments to the specification and drawings are necessary to correct errors inadvertently incorporated into the original patent.

Accordingly, Applicant has identified the errors which are relied upon to support the present reissue application. Reconsideration and withdrawal of the rejection are respectfully requested.

III. The Reissue Claims Have Proper Scope Under 35 U.S.C. 251

Claims 22-50 were rejected under 35 U.S.C. 251 as being an alleged improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. This rejection is respectfully traversed.

Analysis under the recapture rule is a three step process. The first step in applying the recapture rule is to determine whether and in what aspect the reissue

claims are broader than the original patent claims. See *In re Clement*, 131 F.3d 1464, 1468-69 (Fed. Cir. 1997). A reissue claim which includes subject matter not covered by the original patent claims may be considered a broadened claim. See M.P.E.P. § 1412.03. The second step in applying the recapture rule is to determine whether the broader aspects of the reissue claims relate to surrendered subject matter. See *Clement*, 131 F.3d at 1468-69. In order to satisfy this second step, the record of the original application must show that the broadening aspect relates to subject matter that applicant previously surrendered. See M.P.E.P. § 1412.02. Finally, it must be determined whether the reissued claims were materially narrowed in other respects to avoid the recapture rule. See *Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 1371 (Fed. Cir. 2001). With respect to the third step, the reissue claim first must be compared to any claims canceled or amended during prosecution to determine whether it as broad or broader in scope than a claim that was amended during prosecution. See M.P.E.P. § 1412.02 at 1400-18. Then, it must be determined whether the reissue claim entirely omits any limitation that was added or argued during the original prosecution. *Id.* If the reissue claim recites a broader form of the key limitation added during original prosecution, then the reissue claim may not be rejected under the recapture doctrine. *Id.* (citing *Ex Parte Eggert*, 67 U.S.P.Q.2d 1716 (Bd. Pat. App. & Inter. 2003)).

As amended, Claim 22 recites an assembly for operating an engine valve comprising: a rocker shaft; a rocker arm pivotally mounted on said rocker shaft, said rocker arm including a cavity at a valve actuation end; an hydraulic lash adjuster slidably disposed in the rocker arm cavity; an hydraulic passage provided in the rocker

arm, said passage communicating with the rocker arm cavity; and means for (a) selectively supplying hydraulic fluid to the passage during a positive power mode of engine operation and (b) venting hydraulic fluid from the passage during an engine braking mode of engine operation, wherein the engine braking mode comprises at least two braking operations. Claims 23-26 depend from Claim 22 and include at least all of the limitations recited therein.

As amended, Claim 27 recites a method of operating an engine valve lash adjuster in an internal combustion engine comprising the steps of: determining that an engine is operating in a positive power mode; selectively supplying hydraulic fluid to a lash adjuster in response to a determination that the engine is operating in a positive power mode of operation; determining that the engine is operating in an engine braking mode; and venting hydraulic fluid from the lash adjuster in response to a determination that the engine is operating in an engine braking mode of operation, wherein the engine braking mode comprises at least two braking operations.

As amended, Claim 28 recites an engine valve actuation system for positive power mode and compression brake mode engine operation, said system comprising: a first rocker arm positioned to selectively actuate one or more valves associated with an engine cylinder; a first hydraulic lash adjuster operatively contacting the first rocker arm, said first hydraulic lash adjuster being adapted to provide more lash during compression brake operation than during positive power operation; a second rocker arm positioned to selectively actuate at least one of the one or more valves associated with the engine cylinder; and a second hydraulic lash adjuster operatively contacting the second rocker

arm, said second hydraulic lash adjuster being adapted to provide more lash during positive power operation than during compression brake operation, wherein the compression brake operation comprises a first compression release event and a second compression release event. Claims 29-39 depend from Claim 28 and include at least all the limitations recited therein.

Claim 40 recites an engine valve actuation system for positive power mode and two-cycle compression brake mode engine operation, said system comprising: an exhaust rocker arm positioned to selectively actuate an exhaust valve; a first hydraulic lash adjuster positioned between the exhaust rocker arm and the exhaust valve; a brake rocker arm positioned to selectively actuate the exhaust valve; and a second hydraulic lash adjuster positioned between the brake rocker arm and the exhaust valve. Claims 41-47 depend from Claim 40 and include at least all the limitations recited therein.

As amended, Claim 48 recites a method for positive power mode and compression brake mode engine valve actuation in a system having first and second rocker arms used to actuate an engine valve, said method comprising the steps of: providing hydraulic fluid to a first lash adjuster associated with the first rocker arm and draining hydraulic fluid from a second lash adjuster associated with the second rocker arm during positive power mode; actuating the engine valve with the first rocker arm during positive power mode; providing hydraulic fluid to the second lash adjuster and draining hydraulic fluid from the first lash adjuster during compression brake mode; and actuating the engine valve with the second rocker arm during compression brake mode, wherein the compression brake mode comprises a first compression release event and

a second compression release event. Claims 49-50 depend from Claim 48 and include at least all of the limitations recited therein.

Assuming, *arguendo*, the reissue claims in the present application, Claims 22-50, are broader in scope than the original patent claims, the broadening aspects of the reissue Claims do not relate to any subject matter surrendered during prosecution of the original patent. In the Office Action dated March 22, 2004, and again in the latest Office Action dated November 19, 2004, the Examiner cites an amendment received on 19 May 1999 in the original patent application which added language to independent claims 1 and 23 (which became patented claim 19). The language added to original claim 1 is "wherein said braking means accomplishes at least two braking operations for the at least one exhaust valve per engine cycle during the engine braking operation, wherein said intake valve operating means delays the operation of the at least one intake valve during the engine braking operation." In claim 23, the language added by amendment is (as underlined below):

performing a first compression release event, wherein said first compression release event includes the steps of opening at least one exhaust valve to effectuate engine braking and closing the at least one exhaust valve after predetermined time, wherein said step of opening the at least one exhaust valve to effectuate engine braking during said first compression release event is initiated prior to compression top dead center;

performing a second compression release event, wherein said second compression release event includes opening the at least one exhaust valve to effectuate engine braking, and closing the at least one

exhaust valve after predetermined time, wherein said step of opening the at least one exhaust valve to effectuate engine braking during said second compression release event is initiated prior to compression top dead center; and

delaying the opening of at least one intake valve for a predetermined time during engine braking.

In order to satisfy the second step of the recapture rule, the record of the original application must show that the broadening aspect of the reissue claims relates to subject matter that applicant previously surrendered. See M.P.E.P. § 1412.02. No aspect of the reissue Claims 22-50 relates to the subject matter provided by the amendments cited above.

Nevertheless, even if broader aspects of the reissue claims exist *and* relate to surrendered subject matter, which they do not, the reissue claims satisfy the third step of the recapture analysis outlined above. First, the reissue claims are not broader in scope than any claim amended in the original prosecution of the patent. Second, the reissue claims do not entirely omit any limitation that was added or argued during the original prosecution of the patent to overcome an art rejection. In particular, Reissue Claims 22 and 27 have been amended to recite the limitation “wherein the engine braking mode comprises at least two braking operations” Reissue Claims 28 and 48 have been amended to recite the limitation “wherein the compression brake operation comprises a first compression release event and a second compression release event.” Claim 40 recites an engine valve actuation system for positive power and *two-cycle compression brake mode engine operation*. (emphasis added). As such, the Reissue

Claims recite a broader form of the key limitation added during original prosecution. See MPEP § 1412.02 at 1400-18. Accordingly, Applicants respectfully submit that Claims 22-50 are not an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue application is based. Reconsideration and withdrawal of the rejection are respectfully requested.

IV. 35 U.S.C. 102(e) Rejection

Claims 22, 25, 26, and 27 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,680,841 to Hu (hereinafter "Hu"). This rejection is respectfully traversed.

As amended, Claim 22 recites an assembly for operating an engine valve comprising: a rocker shaft; a rocker arm pivotally mounted on said rocker shaft, said rocker arm including a cavity at a valve actuation end; an hydraulic lash adjuster slidably disposed in the rocker arm cavity; an hydraulic passage provided in the rocker arm, said passage communicating with the rocker arm cavity; and means for (a) selectively supplying hydraulic fluid to the passage during a positive power mode of engine operation and (b) venting hydraulic fluid from the passage during an engine braking mode of engine operation, wherein the engine braking mode comprises at least two braking operations. Claims 25 and 26 depend from Claim 22 and include at least all of the limitations recited therein.

As amended, Claim 27 recites a method of operating an engine valve lash adjuster in an internal combustion engine comprising the steps of: determining that an engine is operating in a positive power mode; selectively supplying hydraulic fluid to a

lash adjuster in response to a determination that the engine is operating in a positive power mode of operation; determining that the engine is operating in an engine braking mode; and venting hydraulic fluid from the lash adjuster in response to a determination that the engine is operating in an engine braking mode of operation, wherein the engine braking mode comprises at least two braking operations.

Hu does not teach or suggest the subject matter of the Reissue Claims. Hu discloses an internal combustion engine with combined cam and electro-hydraulic engine valve control. The device disclosed in Hu includes a hydraulic circuit and a hydraulic fluid accumulator that helps keep the circuit filled with hydraulic fluid. See Hu, Col. 4, ll. 1-36. The hydraulic fluid is constantly supplied to the circuit regardless of a determination whether the engine is operating in a positive power mode of operation. *Id.* As such, Hu does not disclose, teach, or suggest means for selectively supplying hydraulic fluid to the passage during a positive power mode of engine operation, nor the step of selectively supplying hydraulic fluid to a lash adjuster in response to a determination that the engine is operating in a positive power mode of operation, as presently claimed. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

V. Conclusion

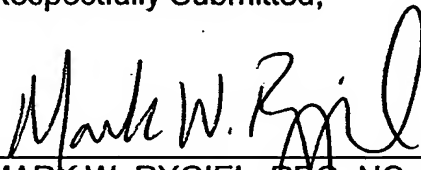
In view of the foregoing amendments and remarks, Applicants respectfully submit that the pending Claims 1-50 of the present reissue application define subject matter patentable over the references cited by the Examiner and that the application is in condition for allowance. Should the Examiner believe that anything further is desirable

to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the below listed telephone number.

The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to deposit account number 03-2469. Moreover, if the deposit account contains insufficient funds, the Commissioner is hereby invited to contact Applicants' undersigned representative to arrange payment.

Respectfully Submitted,

Date: March 21, 2005



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May 12, 2005

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Re: U.S. Patent Reissue Application No.: 10/013,988
For: MULTI-CYCLE, ENGINE BRAKING WITH POSITIVE POWER VALVE
ACTUATION CONTROL SYSTEM AND PROCESS FOR USING THE SAME
Our Reference No.: 34090-06263

Dear Sir:

Submitted herewith in connection with the above-identified matter are the following documents:

- (1) Request for Continued Examination in duplicate (2 pages);
- (2) Fee Transmittal in duplicate (2 pages); and
- (3) Copy of Amendment previously filed on March 21, 2005 (24 pages).

Please date-stamp the enclosed copy of this letter, thereby acknowledging receipt of the above-identified documents.

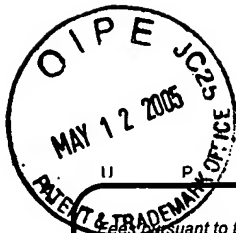
Sincerely yours,

MARK W. RYGIEL, Reg. No. 45,871

Enclosures

MWR/la

Cc: Ann R. Stravalle-Schmidt, Esq.



1995

Effective on 12/08/2004.
Pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).
FEE TRANSMITTAL
For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 1,240

Complete if Known

Application Number 10/013,988
Filing Date December 13, 2001
First Named Inventor COSMA, Gheorghe
Examiner Name E. R. Solis
Art Unit 3747
Attorney Docket No. 34090-06263

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 03-2469 Deposit Account Name: _____

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
Total Claims	Extra Claims	Fee (\$)
- 20 or HP = _____ x _____ = _____		
HP = highest number of total claims paid for, if greater than 20.		
Indep. Claims	Extra Claims	Fee (\$)
- 3 or HP = _____ x _____ = _____		
HP = highest number of independent claims paid for, if greater than 3.		

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets _____ Extra Sheets _____ Number of each additional 50 or fraction thereof _____ Fee (\$) _____ Fee Paid (\$) _____
- 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Request for Continued Examination and 2-month extension of time 1,240

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 45,871	Telephone 202-342-8400
Name (Print/Type)	Mark W. Rygiel		Date

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